What Is Claimed Is:

1. A method for operating at least two interconnected control units (2, 3), the control units (2, 3) accessing sensor data (xl, ... x5) and executing in each case at least one computer program for controlling operational sequences, in particular in a vehicle, and the control units (2, 3) exchanging synchronization information,
wherein the control units (2, 3) execute the same computer program time-synchronously using a settable time lag (80).

2. The method as recited in Claim 1,
wherein the same sensor data (xl, ... x5) are available in the control units (2, 3).

3. The method as recited in Claim 1 or 2,
wherein, in each case, the control units (2, 3) receive only one portion of all sensor data (xl, ... x5) from sensors (13, 14), and the control units (2, 3) exchange sensor data (xl, ... x5), so that all sensor data (xl, ... x5) are available in each control unit (2, 3).

4. The method as recited in one of Claims 1 through 3,
wherein, in the individual control units (2, 3), (the system) holds off on executing the computer programs time-synchronously while accessing the sensor data (xl, ... x5) until all up-to-date sensor data (xl, ... x5) are available in each control unit (2, 3).

5. The method as recited in one of Claims 1 through 4,
wherein the time lag (80) is adjusted as a function of the time duration required for exchanging the sensor data (xl, ... x5) among the control units (2, 3).

6. The method as recited in one of Claims 1 through 5, wherein the time lag (80) is adjusted during operation of the control units (2, 3).

7. The method as recited in Claim 5 or 6, wherein the time lag (80) is regulated as a function of the time duration required for exchanging the sensor data (xl, ... x5) among the control units (2, 3).

8. The method as recited in one of Claims 5 through 7, wherein the time lag (80) is adjusted or regulated in a damped manner as a function of the time duration required for exchanging the sensor data (xl, ... x5) among the control units (2, 3).

9. The method as recited in one of the preceding claims, wherein the control units (2, 3) are synchronized solely by exchanging useful data via the data transmission media (4), without transmitting separate synchronization information.

10. A computer system comprising at least two interconnected control units (2, 3) and a data transmission medium (4) that connects the control units (2, 3) in order to exchange synchronization information between the control units (2, 3), the control units (2, 3) accessing sensor data (xl, ... x5) and executing in each case at least one computer program for controlling operational sequences, in particular in a vehicle, wherein the control units (2, 3) execute the same computer program time-synchronously using a time lag (80) that is adjustable by setting means.

11. The computer system as recited in Claim 9, wherein one of the control units is defined as a master control unit (2), and the remaining control units are defined as slave control units (3), the master control unit (2)

transmitting synchronization information to the slave control units (3).

12. The computer system as recited in Claim 10, wherein once the computer system is booted up, the slave control units (3) are automatically synchronized to the time base of the master control unit (2).

13. The computer system as recited in one of the Claims 9 through 11, wherein only one portion of the sensors (13, 14) is connected in each case to the control units (2, 3); in each case, the control units (2, 3) receive only one portion of all sensor data (xl, ... x5); and the control units (2, 3) exchange sensor data (xl, ... x5) via the data transmission medium (4), so that all sensor data (xl, ... x5) are available in each control unit (2, 3).

14. The computer system as recited in one of the Claims 9 through 12, wherein, in the individual control units (2, 3), means are provided for holding off on executing the computer programs time-synchronously while accessing the sensor data (xl, ... x5) until all up-to-date sensor data (xl, ... x5) are available in each control unit (2, 3).

15. The computer system as recited in one of the Claims 9 through 13, wherein each control unit (2, 3) is subdivided into a hardware level (5), a hardware driver level (6), and an application software level (7), the computer program for controlling the operational sequences running in the application software level (7), and the sensor data (xl, ... x5) being transmitted independently of the application software level (7) in the hardware driver level (6).

16. The computer system as recited in one of the Claims 12 through 14,
wherein the sensors (13, 14) are assigned to the control units (2, 3) and are linked to the control units (2, 3) assigned to them respectively in such a way that, during operation of the computer system, a substantially uniform usage results on the average over time on the data transmission medium (4) in both transmission directions.

17. The computer system as recited in one of the Claims 9 through 15,
wherein the data are transmitted via the data transmission medium (4) in accordance with the CAN (controller area network) protocol.